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SFGiannotta/jm  
7/26/73

Senator Olympio T. Borja  
Chairman, Special Joint Committee  
Concerning Rongelap and Utirik Atolls  
Congress of Micronesia  
Saipan, Mariana Islands 96950

Dear Senator Borja:

I am pleased to forward our response to Mr. Mamora Nakamura's inquiries which I discussed in my letter of July 13, 1973, to you. The full textual reply to each question has been provided in the enclosure with pertinent reports forwarded under separate cover.

I hope that this information will prove to be helpful to you.

Sincerely,

Clarence E. Larson  
Commissioner

Enclosure:

14635

REPLIES TO QUESTIONS FROM THE OFFICE OF  
THE LEGISLATIVE COUNSEL, CONGRESS OF MICRONESIA

Question 1: "All information, including policy statements, and dates relative to when above-ground testing ceased in the continental United States; when it began in Pacific area; and when such testing ceased in the Pacific area."

Answer 1: Except for the first U.S. nuclear test on July 16, 1945, at Alamogordo, New Mexico, aboveground testing by the U.S. began in the Pacific with tests at Bikini on June 30 and July 24, 1946. After further Pacific testing at Eniwetok in 1948, aboveground testing in Nevada began on January 27, 1951. Testing continued both in the Pacific and in Nevada from 1951 until the voluntary moratorium in late 1958. The last U.S. test before the moratorium was an aboveground test at Nevada on October 30, 1958.

U.S. testing resumed on September 15, 1961, with an underground test at Nevada. The last aboveground test in Nevada took place on July 17, 1962. The resumption of aboveground testing, following the moratorium, was in the Pacific with a test at Christmas Island on April 25, 1962. Aboveground testing continued in the Pacific at Christmas and Johnston Islands through November 4, 1962, the date of the last U.S. atmospheric test and the last Pacific area test.

Attached, as requested, are a number of policy statements.

*See separate copies*

Question 2: "Information relating to payment for use of Bikini and Eniwetok Atolls, and payment of compensation for those people (Marshallese, American, and Japanese) irradiated by the March 1, 1954 test."

NOTE: The payments referred to in this item were the primary concern of the Department of State, the Department of the Interior, and the Department of the Navy. The following information is based on material gathered from available AEC files only.

Answer 2: The former residents of Eniwetok who possessed rights in land there were paid \$175,000. Of this sum, \$25,000 was paid directly to the islanders and \$150,000 was put in a trust fund invested in U.S. Government bonds. This arrangement is set forth in a document entitled "Agreement in Principle Regarding the Use of Eniwetok Atoll," dated November 19, 1956. The agreement was between the Trust Territory Government and the natives, with the U.S. Government being the ultimate source of the funds. Similarly, in 1956 the former residents of Bikini were paid \$325,000 for the use of their atoll.

The U.S. Government furnished housing, clothing, provisions, etc., to Marshallese irradiated by the March 1, 1954, test. In addition, the U.S. Government has spent considerable sums for the medical examination and treatment of those people. Further, in 1965, the U.S. Congress appropriated \$950,000 as "compassionate relief" for those same people.

The U.S. Government transmitted a solatium of \$2,000,000 to the Japanese Government in compensation for losses incurred by Japanese nationals as a result of U.S. nuclear tests in the Pacific in the spring of 1954. How the funds were to be apportioned and distributed was left to the discretion of the Japanese Government.

Question 3: "Copies of all reports, surveys, and studies (including cumulative radiation effects on ecology) related to radiation levels on Bikini and Eniwetok and feasibility of returning the people of Bikini and Eniwetok to their home islands."

Question 14: "Copies of any reports, surveys, studies or papers done by or in behalf of any departments, agency, agent, or instrumentality of the U.S. Government" excluding those carried out by the Brookhaven National Laboratory" relative to the conduct of nuclear and thermonuclear testing in the Trust Territory of the Pacific Islands."

NOTE: The responses to Questions 3 and 14 are essentially the same and are therefore combined below.

Answer: The following is a listing of the requested reports. There is more information available for Bikini than for Eniwetok since earlier consideration was given to rehabilitation of Bikini. Copies of all of these reports are being forwarded under separate cover.

1. "Radioactive Contamination of Certain Areas in the Pacific Ocean from Nuclear Tests," edited by Gordon M. Dunning, August 1957.
2. "Preliminary Studies of the Persistence of Tritium and  $^{14}\text{C}$  in the Pacific Proving Ground," by John J. Koranda, Health Physics, Volume 11, Number 12, December 1965.
3. "Distribution of Radionuclides in the Environment of Eniwetok and Bikini Atolls, August 1964," by A. D. Welander, College of Fisheries, University of Washington, Seattle, Washington. CONF-670503, Symposium on Radioecology, Proc. of the Second National Symposium, Ann Arbor, Michigan, May 15-17, 1967.
4. "Bikini-Eniwetok Studies-1964, Part II, Radiobiological Studies," by Welander, Bonham, Palumbo, Gessel, Lowman, Jackson, McClin, and Lewis, Laboratory of Radiation Biology, University of Washington, Seattle, Washington, September 8, 1967, UWFL-93, Part II.

5. "External Radiation Levels on Bikini Atoll - May 1967," HASL-190, December 1967.
6. "Radiological Report on Bikini Atoll," by Philip F. Gustafson, Division of Biology and Medicine, U.S. Atomic Energy Commission, Washington, D. C., April 1968.
7. "Additions to Radiological Report on Bikini Atoll," by Philip F. Gustafson, Division of Biology and Medicine, U.S. Atomic Energy Commission, Washington, D. C., May 1968.
8. "Radiological Resurvey of Animals, Soils, and Ground Water at Bikini Atoll, 1969-1970," NVO-269-8, Revision 1, by Edward E. Held, February 1971.
9. "Report of the Radiological Clean-up of Bikini Atoll," SWRHL-111r, by Allan E. Smith and William E. Moore, January 1972.
10. "Some Effects of Ionizing Radiation on Human Beings," edited by E.P. Cronkite, V.P. Bond, and C.L. Dunham, July 1956.

Question 4: "Copies of all pertinent agreements and information relating to the cost of AEC-DOD operations [in] the Trust Territory of the Pacific, costs of medical and other surveys by the AEC and DOD, and the costs incurred by the AEC and DOD in providing rehabilitation for said atolls."

Answer 4: The total identifiable incremental DOD/AEC cost for medical, surveys, and rehabilitation efforts through fiscal year 1973 is reflected below:

1. AEC cost of research related to medical studies of the Marshallese people -----	\$1,700,000
2. AEC logistical support cost -----	300,000
3. DOD/AEC Bikini survey and cleanup cost -----	1,062,761
4. DOD/AEC Eniwetok survey -----	<u>1,894,800</u>
TOTAL	\$4,957,561

*AEC / DOD Agreements on Bikini Cleanup  
DEEF Agreement on Conard*



Question 5: "Specific dates of each nuclear or thermonuclear test, whether under, on or above ground or sea-level, kilo or megatonnage of each detonation and observed and observable damage or effects to reefs, lands and environment of the atolls of Bikini and Eniwetok."

Question 6: "Copies of weather charts, summaries and data relevant to the March 1, 1954 test."

Question 8: "Total explosive force released during tests conducted in the Trust Territory of the Pacific Islands and studies and surveys related to cumulative, and residual background radiation levels in the Marshall Islands from the time testing began in 1946 until the present."

NOTE: These questions are closely related in the subject material of interest and a comprehensive response is presented.

Answer: Information on announced nuclear tests conducted in the vicinity of Bikini and Eniwetok (and other testing locations) is given in "The Effects of Nuclear Weapons," Samuel Glasstone, Editor, Revised Edition, Reprinted February 1964. See Appendix B, page 671. This report is being forwarded under separate cover. In addition, the following list of tests has since been announced and is provided here.

<u>NAME</u>	<u>DATE (GCT)</u>	<u>TIME (GCT)</u>	<u>LOCATION OF SHOT</u>	<u>TYPE OF BURST</u>	<u>MEAN SEA LEVEL (FT.) TROPopause</u>
YUMA	5/27/56	1956	Eniwetok	Atmospheric	55,500
KIKAPOO	6/13/56	2326	Eniwetok	Atmospheric	53,100
INCA	6/21/56	2156	Eniwetok	Atmospheric	54,400
MOHAWK	7/2/56	1806	Eniwetok	Atmospheric	56,800
PISONIA	7/17/58	2300	Eniwetok	Atmospheric	52,500
QUINCE	8/6/58	0215	Eniwetok	Atmospheric	52,100
FIG	8/18/58	0400	Eniwetok	Atmospheric	52,100

<sup>and radi-sat</sup>  
Meteorology information extracted from an unclassified report on Operation CASTLE is being provided under separate cover.

For a fuller review of the "effects" aspects of these questions, see the reports being forwarded in response to Question 3, in particular report number 10. That report contains information on cumulative radiation for Rongelap, Ailinginae, Rongerik, and Utirik Atolls. Several of the

Reference "Proving Ground" by Neal O. Hines  
University of Washington Press, 1962 (over)

other reports contain information on radiation levels  
at islands within Bikini and Eniwetok Atolls.

"Bombardment of Bikini" - The official  
Report of Operation Crossroads, 1947

{ Wm H. Wise & Co Inc, 336 Mountain  
Rd, Union City N.J. 07087

"Operation Crossroads", the official  
Pictorial Record, 1946

ditto

Question 7: "Two copies each of all medical surveys and reports concerning the people who were irradiated as a result of the March 1, 1954 test conducted by the Atomic Energy Commission or entities under contract to the AEC."

Answer 7: To our understanding, this question was satisfactorily answered by Dr. Robert A. Conard of the Brookhaven National Laboratory, Upton, New York, who provided the requested reports.

Question 9: "Precautions taken and instructions, and information disseminated to U.S. personnel preparatory to the conduct of tests in the Trust Territory of the Pacific Islands from 1946 to 1954."

Question 10: "Precautions taken and instructions, and information disseminated to Micronesians residing in the test area during the period 1946 to 1954."

Question 11: "Precautions taken and instructions, and information disseminated to both of the groups mentioned in nos. 9 and 10 after March 1, 1954 until the cessation of such tests."

Question 12: "Precautions taken and instructions, and information disseminated to Marshallese citizens after the cessation of tests."

NOTE: Because of their similarity, these questions are answered as a group.

Answer: This information is in records of each test which have since been retired to the National Archives and the Washington National Record Center where they are available for research depending on need-to-know and classification. These records occupy over 150 cubic feet of storage. It would be unreasonably costly and time consuming to extract the unclassified information pertinent to this inquiry.

*Not acceptable  
Let Conrad to provide  
Under file summary*

Question 13: "A listing of dates, locations, number involved, and type of incidents involving the irradiation and/or destruction due to indication or [sic] persons, animals, crops, lands or structures in the United States as a result of tests, research, operations or manufacture of nuclear or thermo-nuclear devices or materials; claims resulting from such incidents; and amounts and forms of such compensation or consideration accorded by the U.S. Government or its agents to such claimants."

Answer 13: Two publications which address the matter of operational accidents and workmen's compensation and radiation injuries are being forwarded under separate cover. "Operational Accidents and Radiation Exposure Experience," WASH 1192, Fall 1971, provides available information, descriptions, and statistics regarding disabling injuries, radiation exposures, contaminations, criticalities, fatalities and property damage accidents within the Atomic Energy Commission through 1970. "Studies in Workmen's Compensation and Radiation Injury," Volume V, 1969, is a compilation, in abbreviated form, of cases which involve allegations of injuries arising out of exposure to ionizing radiation.

Question 15: "Are there now existent Department of Defense or AEC documents relating to testing in the Trust Territory of the Pacific Islands--excluding those related to the nature of the device themselves--which are at present classified?"

Answer 15: Yes.